

Department of Ecology - Applications and Data Services
Information Technology (IT) Contractor Guidelines
Last Update: 4/1/2009

Purpose

The purpose of this guideline is to protect Ecology's existing IT infrastructure, applications, and staff resources from unintended consequences caused by the development, modification and/or installation of software or hardware on the Agency's IT infrastructure.

Background

The mission of the Department of Ecology is to protect, preserve and enhance Washington's environment, and promote the wise management of our air, land and water. In support of this mission the collection and use of data in automated systems has become routine. It has become critical to Ecology's business processes that the Agency's IT infrastructure and applications are functional and accessible during normal business hours.

Over time the Ecology's IT infrastructure and applications have grown increasingly complex. This is due in part to the growth in the number of servers and applications but current trends in application design (OO, SOA, etc.) are also major contributors. Unintended consequences to existing applications and/or hardware have occurred when new applications and/or hardware have been implemented or existing applications and/or hardware modified.

Audience

These guidelines apply to all IT contractors that are, or may be, developing and/or implementing applications, hardware, or off-the-shelf software where any component of the solution is owned or administered by Ecology's employees. This includes but is not limited to all Ecology owned or administered applications, web, databases, or GIS software, regardless of their physical location or which domain they belong.

The Agency's [IT Technical Architecture Review Process](#) will assist IT contractors to implement solutions that conform to Ecology's IT standards and guidelines.

Goals

The primary goals of these guidelines are to:

- Assist contractors to conform to Ecology's IT standards, guidelines, infrastructure goals and organization.
- Establish early and frequent communication between IT contractors and Strategic Architecture Team (SAT) responsible for reviewing and approving the technical architecture for the application or off-the-shelf software.

Guidelines

- Prior to the design and development of the solutions, the IT contractor sends an email to SAT liaisons (SATliaisons@ecy.wa.gov) to request a project briefing meeting. A SAT member will get back to the requestor within 48 hours to make the arrangement.
- Review [Enterprise Common Services](#) to get familiar with services available at Ecology.
- Review [IT Technical Architecture Review Process](#) to get familiar with the review and approval process for all IT projects.
- Review [current standard image for Ecology's desktop](#) and [development tools and servers](#) to ensure project will conform to Ecology's infrastructure.
- Review the [sample architecture plan](#). Every IT project is required to submit an architecture plan to the SAT for approval before coding or purchasing the solution. The SAT and IT contractor will jointly determine the timeline to submit this plan during their initial meetings.

Development

- Review the [C# naming convention](#) guidelines
- Review [the Ajax guidelines](#), if the solution has an Ajax component.
- Review the [LINQ guidelines](#), if the solution is going to use LINQ.
- Review the [Web Services Guidance](#), if the solution is going to host web services.
- Review the Data Naming Standards.
- Review folder structure guidelines if the solution is using [Visual Source Safe](#) or [Team Foundation Server](#).
- Use of Beta software for development is prohibited however exceptions may be made to meet critical business requirements.
- Installation of new software/hardware or upgrades to existing software/hardware required by an application should not be taken for granted and must be approved.
- Configuration changes to Ecology hardware and software should also not be taken for granted and must be approved.
- Applications should not be written in a manner to require Administrator privileges on the server.
- Use of Stored Procedures is recommended.
- Avoid the following bad practices:
 - Use of Embedded SQL
 - ODBC/DSN type of connections
 - Hard coded of folder paths
- **Helpful Tool:** Download * [Web Application Project Templates](#). This tool generates the basic structure for 3 tiers web application for both VS2008 and VS2005. The generated application includes sample Ecology Master Pages, security handling, report services handling and sample 3 tiers codes.

Security

- Review instructions to set up security for *[Intranet](#) or *[Internet](#) to conform to agency security standard.
- Applications must be designed in a manner to prevent unauthorized alteration of code or content.
- The in-house use of contractor supplied equipment must be approved prior to connection to the Agency's network.

Deployment

- All applications must be deployed to the Agency's Dev/Test platform prior to being deployed to the Production platform.
- A* [WEB Application Installation/Deployment Form must](#) be completed for all new applications and must be updated as needed for existing applications. This form can be found on the Agency's intranet or will be supplied upon request.

Please note: The links denoted with asterisk are only available to the Ecology intranet.

Document History

Date	Version	Editor	Change
03-03-2006	1		Adopted by BITAC
08-11-2008	2.Draft	Son Tran	Change to reflect the new role of Strategic Architecture Team as well as new guidelines and standards.
09-29-2008	2	SAT approved	Approved this version. SAT suggested to include Network and Desktop portion when they are ready.